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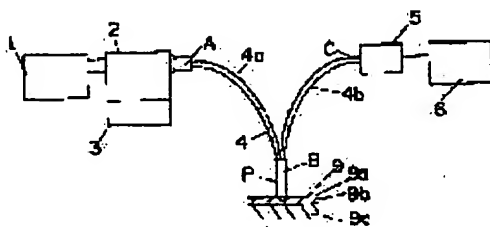
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## (54) ANALYSIS METHOD FOR BLOOD COMPONENT DENSITY, DEVICE THEREFOR AND OPTICAL FIBER BUNDLE FOR THE DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To accurately perform the determination of a blood component density non-invasively by performing spectroscopic analysis by using near infrared light selectively transmitted through a cutis part in the surface layer tissue of a living body and performing quantitative analysis by using the correlation of the intra-blood component density and the density in the cutis part of a component for which the determination is a purpose.

SOLUTION: The spectroscopy of light from a halogen lamp 1 is performed in a diffraction grating unit 2 housing a diffraction grating, and in a stepping motor unit 3, the rotation angle of the diffraction grating is controlled and a spectroscopic wavelength is adjusted. This optical fiber bundle 4 transmits the light after the spectroscopy to an object to be measured and sends transmission light to a light receiving unit 5 and an arithmetic unit 6 performs the determination of a glucose density based on signals from the light receiving unit 5. An absorption spectrum belonging to a near infrared area is utilized for the glucose density determination and multivariate analysis is executed. The multivariate analysis uses a check base obtained by PLS regression analysis and an analytical curve is obtained by an experiment using an analysis device beforehand.



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(54) 【発明の名称】 血液成分濃度の分析方法及びその装置と該装置用光ファイバーバンドル

## (57) 【要約】

【課題】 グルコースといった血液成分濃度の定量を非侵襲で精度良く行う。

【解決手段】 生体の血液成分濃度を近赤外光の分光分析で行うにあたり、生体の表皮組織における真皮部分を選択的に透過させた近赤外光あるいは真皮部分で選択的に拡散反射させた近赤外光を用いて分光分析を行い、定量を目的とする成分の血中成分濃度と上記真皮部分中の濃度との相関を利用して定量分析を行う。

